

# FLOWSEAL PRICE LIST

EFFECTIVE DATE: APRIL 1ST 2001

SUPERSEDES: 8-1-95

## **THIS INFORMATION IS CONFIDENTIAL**

*Failure on the part of the Representative or Distributor to exercise proper control over this information could result in the termination of existing contract agreements*

## **TABLE OF CONTENTS**

Terms and Conditions	2-3
Soft Seat – Wafer & Lug – CS Body – 17-14PH Shaft	4-5
Soft Seat – Wafer & Lug – SS Body – 17-14PH Shaft	6-7
Soft Seat – Wafer & Lug – SS Body – 316SS/Nitronic 50 Shaft	8-9
Fire Flow – Wafer & Lug – CS Body	10-11
Fire Flow – Wafer & Lug – SS Body	12-13
Metal Seat – Wafer – CS Body	14-15
Metal Seat – Lug – CS Body	16-17
Metal Seat – Wafer – SS Body	18-19
Metal Seat – Lug – SS Body	20-21
Steam Service to 100 PSIG – Soft Seat	22-23
Optional Adders	24-25
Seat Repair Kits – Classes 150, 300 & 600	26-28
Accessories – Chainwheels	29

**All Prices Are Subject To Change Without Notice**

# CRANE VALVE TERMS AND CONDITIONS

## FLOWSEAL, CENTER LINE, AUTOMATION AND DUO CHEK

### **CONFIDENTIALITY**

The information contained in this document is confidential. Failure on the part of a Distributor to exercise proper control over this information could result in termination of the Distributor as a sales agent.

### **VALIDITY**

These terms and conditions are effective April 1, 2001 and supersede all previously published. They are subject to change without notice.

### **MINIMUM ORDER VALUE**

Valves: \$200 Minimum Net Order Value  
Parts: \$50 Minimum Net Order Value

### **FREIGHT**

- (1) All orders shipped F.O.B. Shipping Point.
- (2) Individual orders will be shipped surface freight to one location in the continental United States full freight allowed according to the following schedule:

Center Line or Duo Chek	Minimum Order Value
	\$5,000
Flowseal, Automation or any combination of products	\$10,000

### **PAYMENT TERMS**

2% 10 Days, Net 30 Days.

# CRANE VALVE TERMS AND CONDITIONS

## FLOWSEAL, CENTER LINE, AUTOMATION AND DUO CHEK

### **INVENTORY REVIEW AND EXCHANGE**

- (1) Crane Valve Sales Managers will review Distributor inventory movement once per year and arrange authorization for an exchange of all non-moving Crane Valve product up to five percent (5%) of normally repetitive sales.
- (2) Material that is being exchanged must be in the current published price sheet and is subject to a fifteen percent (15%) restocking charge with freight to be prepaid by the returning Distributor.
- (3) Minimum return allowable under this policy is \$1,000 net.
- (4) Any exchange over ten percent (10%) of normally repetitive sales of product listed in the current published price sheet will carry a thirty five percent (35%) restocking charge.
- (5) Product to be returned under this policy shall be in new, unused, and saleable condition.

### **RESTOCKING AND ORDER CANCELLATION**

- (1) Products that are modified are non-cancelable and non-returnable.
- (2) All parts are non-returnable.
- (3) Crane Valve cannot accept return of any product unless written permission has first been obtained from Crane Valve by the Distributor.
- (4) Standard products not covered in the Inventory Review and Exchange Policy that are to be returned must be in new, unused, and saleable condition. Allowable credit will be issued only after inspection of product at the factory.
- (5) The return of any product will be at the discretion of Crane Valve.
- (6) Standard restocking fee is thirty five percent (35%).
- (7) Return freight must be prepaid by the Distributor.
- (8) Actuators, levers, and gear operators originally assembled with valves may not be returned without the valves on which they were mounted.
- (9) All returned product must be labeled clearly with the Crane Valve Return Goods Number on the outside of the shipping package.

### **ERRORS AND SHORTAGES**

- (1) No claims for shortages, receipt of incorrect product, or for clerical or other errors will be allowed unless reported in writing no later than seven (7) days after the Distributor's receipt of product. Issuance of credit is dependent upon Crane Valve approval.

**FLOWSEAL:**

**SOFT SEAT - WAFER - CS BODY  
17-4PH SHAFT**

**SOFT SEAT - CLASS 150 (1) - WAFER STYLE (W) - CARBON STEEL BODY (1)  
316 SS DISC(2), 17-4 PH SHAFT(1), PTFE SEAT(T), PTFE PACKING(T), GLASS BACKED PTFE BEARINGS(G)**

Figure No.	Actuator	2"	2.5"	3"	4"	5"	6"	8"
121TTG-B	NONE (B)	802	802	802	914	1,262	1,262	1,691
121TTG-H	HANDLE (H)	874	874	874	985	1,346	1,346	1,819
121TTG-3	GEAR (3)	1,071	1,071	1,071	1,182	1,531	1,531	1,959

Figure No.	Actuator	10"	12"	14"	16"	18"	20"	24"	30"	36"	42"	48"
121TTG-B	NONE	3,192	4,321	6,365	8,941	10,767	12,819	17,521	36,417	55,420	87,984	149,855
121TTG-3	GEAR	3,505	5,011	7,101	9,677	11,503	14,066	20,142	40,563	59,656	97,313	160,502

**SOFT SEAT - CLASS 300 (3)**

Figure No.	Actuator	2"	2.5"	3"	4"	5"	6"
121TTG-B	NONE	862	862	862	1,080	1,502	1,502
121TTG-3	GEAR	1,123	1,123	1,123	1,341	1,764	1,764

Figure No.	Actuator	8"	10"	12"	14"	16"	18"	20"	24"	30"
121TTG-B	NONE	2,796	3,786	5,290	10,144	12,460	16,298	21,814	28,298	55,015
121TTG-3	GEAR	3,057	4,456	5,959	10,880	13,671	24,360	24,360	32,324	62,550

**SOFT SEAT - CLASS 600 (6)**

Figure No.	Actuator	2"	2.5"	3"	4"	5"	6"	8"	10"	12"	14"	16"
121TTG-B	NONE	1,617	1,657	1,657	2,598	N/A	4,045	6,033	8,107	11,400	21,993	33,297
121TTG-3	GEAR	2,124	2,164	2,164	3,107	N/A	4,552	7,335	9,446	12,351	25,250	38,165

**NOTES:**

- (1) Hand Levers are not recommended for use with Class 150 Soft Seat Valves larger than 8" and Class 300 larger than 6" sizes. Hand Levers are not recommended for use with Class 600 Valves.
- (2) **Note** - that the **RTFE seat** is preferred to the **TFE seat** for the higher pressures associated with Class 600 valves - and should be considered where a shutoff pressure exceeds 1000 psi. **RTFE** price adders appear on Pages 22 & 23.
- (3) See Pages 24 & 25 for Optional Adders.

**FLOWSEAL:****SOFT SEAT - LUG - CS BODY  
17-4PH SHAFT****SOFT SEAT - CLASS 150 (1) - LUG STYLE (L) - CARBON STEEL BODY (1)**

316 SS DISC(2), 17-4 PH SHAFT(1), PTFE SEAT(T), PTFE PACKING(T), GLASS BACKED PTFE BEARINGS(G)

Figure No.	Actuator	2"	2.5"	3"	4"	5"	6"	8"
121TTG-B	NONE (B)	1,075	1,075	1,075	1,271	1,983	1,983	2,490
121TTG-H	HANDLE (H)	1,147	1,147	1,147	1,342	2,067	2,067	2,618
121TTG-3	GEAR (3)	1,344	1,344	1,344	1,539	2,252	2,758	4,196

Figure No.	Actuator	10"	12"	14"	16"	18"	20"	24"	30"	36"	42"	48"
121TTG-B	NONE	3,927	5,137	6,579	10,022	11,740	15,085	21,442	39,086	61,053	97,832	163,040
121TTG-3	GEAR	4,240	5,826	7,315	10,758	12,476	16,332	24,063	43,232	65,199	107,160	173,687

**SOFT SEAT - CLASS 300 (3)**

Figure No.	Actuator	2"	2.5"	3"	4"	5"	6"
121TTG-B	NONE	1,206	1,206	1,206	1,421	2,241	2,241
121TTG-3	GEAR	1,475	1,475	1,475	1,688	2,508	2,508

Figure No.	Actuator	8"	10"	12"	14"	16"	18"	20"	24"	30"
121TTG-B	NONE	3,135	5,238	7,119	12,375	13,238	17,329	23,408	30,136	58,618
121TTG-3	GEAR	3,404	5,928	7,809	13,132	14,486	19,950	26,028	34,281	66,881

**SOFT SEAT - CLASS 600 (6)**

Figure No.	Actuator	2"	2.5"	3"	4"	5"	6"	8"	10"	12"	14"	16"
121TTG-B	NONE	2,029	2,029	2,029	3,183	N/A	4,956	8,737	12,539	16,168	24,610	39,438
121TTG-3	GEAR	2,547	2,547	2,547	3,701	N/A	5,474	10,068	13,906	18,708	27,150	44,972

**NOTES:**

- (1) Hand Levers are not recommended for use with Class 150 Soft Seat Valves larger than 8" and Class 300 larger than 6" sizes. Hand Levers are not recommended for use with Class 600 Valves.
- (2) **Note** - that the **RTFE seat** is preferred to the **TFE seat** for the higher pressures associated with Class 600 valves - and should be considered where a shutoff pressure exceeds 1000 psi. **RTFE** price adders appear on Pages 22 & 23.
- (3) See Pages 24 & 25 for Optional Adders.

**FLOWSEAL:**

# SOFT SEAT - WAFER - SS BODY 17-4PH SHAFT

## SOFT SEAT - CLASS 150 (1) - WAFER STYLE (W) - STAINLESS STEEL BODY (2)

316 SS DISC(2), 17-4 PH SHAFT(1), PTFE SEAT(T), PTFE PACKING(T), GLASS BACKED PTFE BEARINGS(G)

Figure No.	Actuator	2"	2.5"	3"	4"	5"	6"	8"
221TTG-B	NONE (B)	1,134	1,134	1,134	1,282	2,021	2,021	2,963
221TTG-H	HANDLE (H)	1,204	1,204	1,204	1,353	2,105	2,105	3,090
221TTG-3	GEAR (3)	1,402	1,402	1,402	1,551	2,290	2,290	3,231

Figure No.	Actuator	10"	12"	14"	16"	18"	20"	24"	30"	36"	42"	48"
221TTG-B	NONE	4,896	6,854	11,516	12,687	17,613	21,489	31,556	48,367	64,037	97,698	165,333
221TTG-3	GEAR	5,210	7,544	12,252	13,423	18,349	22,736	34,176	62,512	68,183	107,026	175,979

## SOFT SEAT - CLASS 300 (3)

Figure No.	Actuator	2"	2.5"	3"	4"	5"	6"
221TTG-B	NONE	1,207	1,207	1,207	1,371	2,133	2,133
221TTG-3	GEAR	1,468	1,468	1,468	1,631	2,393	2,393

Figure No.	Actuator	8"	10"	12"	14"	16"	18"	20"	24"	30"
221TTG-B	NONE	4,630	6,845	10,064	17,096	18,129	24,696	32,551	46,169	74,004
221TTG-3	GEAR	4,891	7,514	10,733	17,832	19,340	27,242	35,096	50,195	82,830

## SOFT SEAT - CLASS 600 (6)

Figure No.	Actuator	2"	2.5"	3"	4"	5"	6"	8"	10"	12"	14"	16"
221TTG-B	NONE	1,531	1,531	1,531	2,200	N/A	4,311	9,927	12,587	23,761	36,764	52,609
221TTG-3	GEAR	1,863	1,863	1,863	2,646	N/A	4,526	10,564	13,065	24,355	36,396	53,840

**NOTES:**

- (1) Hand Levers are not recommended for use with Class 150 Soft Seat Valves larger than 8" and Class 300 larger than 6" sizes. Hand Levers are not recommended for use with Class 600 Valves.
- (2) **Note** - that the **RTFE** seat is preferred to the **TFE** seat for the higher pressures associated with Class 600 valves - and should be considered where a shutoff pressure exceeds 1000 psi. **RTFE** price adders appear on Pages 22 & 23.
- (3) See Pages 24 & 25 for Optional Adders.

**FLOWSEAL:****SOFT SEAT - LUG - SS BODY  
17-4PH SHAFT****SOFT SEAT - CLASS 150 (1) - LUG STYLE (L) - STAINLESS STEEL BODY (2)**

316 SS DISC(2), 17-4 PH SHAFT(1), PTFE SEAT(T), PTFE PACKING(T), GLASS BACKED PTFE BEARINGS(G)

Figure No.	Actuator	2"	2.5"	3"	4"	5"	6"	8"
221TTG-B	NONE (B)	1,496	1,496	1,496	1,822	2,982	2,982	4,161
221TTG-H	HANDLE (H)	1,568	1,568	1,568	1,893	3,066	3,066	4,289
221TTG-3	GEAR (3)	1,765	1,765	1,765	2,091	3,251	3,251	4,430

Figure No.	Actuator	10"	12"	14"	16"	18"	20"	24"	30"	36"	42"	48"
221TTG-B	NONE	5,896	7,818	11,688	13,983	18,576	24,536	35,174	56,217	76,898	103,898	173,417
221TTG-3	GEAR	6,209	8,508	12,424	14,719	19,312	25,783	37,795	60,362	81,043	112,968	183,759

**SOFT SEAT - CLASS 300 (3)**

Figure No.	Actuator	2"	2.5"	3"	4"	5"	6"
221TTG-B	NONE	1,608	1,608	1,608	1,833	3,184	3,184
221TTG-3	GEAR	1,869	1,869	1,869	2,094	3,445	3,445

Figure No.	Actuator	8"	10"	12"	14"	16"	18"	20"	24"	30"
221TTG-B	NONE	5,265	8,684	12,077	21,041	22,661	29,888	38,607	56,027	78,746
221TTG-3	GEAR	5,526	9,353	12,746	21,776	23,872	32,434	41,153	60,053	87,871

**SOFT SEAT - CLASS 600 (6)**

Figure No.	Actuator	2"	2.5"	3"	4"	5"	6"	8"	10"	12"	14"	16"
221TTG-B	NONE	2,047	2,047	2,047	2,822	N/A	5,389	7,439	12,132	21,009	28,652	64,888
221TTG-3	GEAR	2,624	2,624	2,624	3,399	N/A	5,966	8,920	13,654	23,549	31,192	70,222

**NOTES:**

- (1) Hand Levers are not recommended for use with Class 150 Soft Seat Valves larger than 8" and Class 300 larger than 6" sizes. Hand Levers are not recommended for use with Class 600 Valves.
- (2) **Note** - that the **RTFE** seat is preferred to the **TFE** seat for the higher pressures associated with Class 600 valves - and should be considered where a shutoff pressure exceeds 1000 psi. **RTFE** price adders appear on Pages 22 & 23.
- (3) See Pages 24 & 25 for Optional Adders.

# **FLOWSEAL:**

## **SOFT SEAT - WAFER - SS BODY 316SS / NITRONIC 50 SHAFT**

### **SOFT SEAT - CLASS 150 (1) - WAFER STYLE (W) - STAINLESS STEEL BODY (2)**

316 SS DISC(2), 316 SS SHAFT(2), PTFE SEAT(T), PTFE PACKING(T), GLASS BACKED PTFE BEARINGS(G)

Figure No.	Actuator	2"	2.5"	3"	4"	5"	6"	8"
222TTG-B	NONE (B)	1,142	1,142	1,142	1,294	2,036	2,039	2,989
222TTG-H	HANDLE (H)	1,214	1,214	1,214	1,364	2,120	2,122	3,117
222TTG-3	GEAR (3)	1,411	1,411	1,411	1,561	2,305	2,307	3,258

Figure No.	Actuator	10"	12"	14"	16"	18"	20"	24"	30"	36"	42"	48"
222TTG-B	NONE	4,927	6,901	11,578	12,765	17,710	21,612	31,711	48,568	64,292	98,048	165,833
222TTG-3	GEAR	5,240	7,589	12,314	13,501	18,446	22,859	34,331	52,712	68,436	107,376	176,479

### **SOFT SEAT - CLASS 300 (3)**

316 SS DISC(2), NITRONIC 50 SHAFT(0), PTFE SEAT(T), PTFE PACKING(T), GLASS BACKED PTFE BEARINGS(G)

Figure No.	Actuator	2"	2.5"	3"	4"	5"	6"
220TTG-B	NONE	1,385	1,385	1,385	1,557	2,327	2,332
220TTG-3	GEAR	1,645	1,645	1,645	1,818	2,587	2,593

Figure No.	Actuator	8"	10"	12"	14"	16"	18"	20"	24"	30"
220TTG-B	NONE	4,965	7,453	11,021	18,260	19,905	26,731	36,064	49,928	85,057
220TTG-3	GEAR	5,226	8,123	11,690	18,996	21,116	29,276	38,610	53,955	94,289

### **SOFT SEAT - CLASS 600 (6)**

316 SS DISC(2), NITRONIC 50 SHAFT(0), PTFE SEAT(T), PTFE PACKING(T), GLASS BACKED PTFE BEARINGS(G)

Figure No.	Actuator	2"	2.5"	3"	4"	5"	6"	8"	10"	12"	14"	16"
220TTG-B	NONE	1,982	1,982	1,982	2,564	N/A	4,985	10,643	16,183	21,762	27,996	36,466
220TTG-3	GEAR	2,516	2,516	2,516	3,098	0	5,519	12,014	17,952	24,114	30,348	41,590

#### **NOTES:**

- (1) Valves with 316 SS shafts are rated to 150 psi max. differential pressure for Class 150 ANSI rated valves and 300 psi and 600 psi for Class 300 and Class 600 rated valves respectively. Consult the factory with details for any marginal applications.
- (2) Hand Levers are not recommended for use with Class 150 Soft Seat Valves larger than 8" and Class 300 larger than 6" sizes. Hand Levers are not recommended for use with Class 600 Valves.
- (3) **Note** - that the **RTFE** seat is preferred to the **TFE** seat for the higher pressures associated with Class 600 valves - and should be considered where a shutoff pressure exceeds 1000 psi. **RTFE** price adders appear on Pages 22 & 23.
- (4) See Pages 24 & 25 for Optional Adders.

# **FLOWSEAL:**

## **SOFT SEAT - LUG - SS BODY 316SS / NITRONIC 50 SHAFT**

### **SOFT SEAT - CLASS 150 (1) - LUG STYLE (L) - STAINLESS STEEL BODY (2)**

**316 SS DISC(2), 316SS SHAFT(2), PTFE SEAT(T), PTFE PACKING(T), GLASS BACKED PTFE BEARINGS(G)**

Figure No.	Actuator	2"	2.5"	3"	4"	5"	6"	8"
222TTG-B	NONE (B)	1,505	1,505	1,505	1,833	2,997	3,000	4,188
222TTG-H	HANDLE (H)	1,576	1,576	1,576	1,904	3,081	3,083	4,317
222TTG-3	GEAR (3)	1,773	1,773	1,773	2,101	3,266	3,268	4,457

Figure No.	Actuator	10"	12"	14"	16"	18"	20"	24"	30"	36"	42"	48"
222TTG-B	NONE	5,926	7,863	11,750	14,061	18,674	24,659	35,328	56,418	77,152	104,248	173,917
222TTG-3	GEAR	6,239	8,553	12,486	14,797	19,410	25,906	37,949	60,563	81,297	113,318	184,259

### **SOFT SEAT - CLASS 300 (3)**

**316 SS DISC(2), NITRONIC 50 SHAFT(0), PTFE SEAT(T), PTFE PACKING(T), GLASS BACKED PTFE BEARINGS(G)**

Figure No.	Actuator	2"	2.5"	3"	4"	5"	6"
220TTG-B	NONE	1,778	1,778	1,785	2,020	3,377	3,383
220TTG-3	GEAR	2,038	2,038	2,046	2,280	3,638	3,644

Figure No.	Actuator	8"	10"	12"	14"	16"	18"	20"	24"	30"
220TTG-B	NONE	5,601	9,292	13,034	22,204	24,436	319,923	42,121	59,785	90,326
220TTG-3	GEAR	5,862	9,962	13,703	22,941	25,648	34,469	44,667	63,812	99,556

### **SOFT SEAT - CLASS 600 (6)**

**316 SS DISC(2), NITRONIC 50 SHAFT(0), PTFE SEAT(T), PTFE PACKING(T), GLASS BACKED PTFE BEARINGS(G)**

Figure No.	Actuator	2"	2.5"	3"	4"	5"	6"	8"	10"	12"	14"	16"
220TTG-B	NONE	2,797	2,797	2,797	3,334	N/A	6,063	8,155	12,909	22,003	29,794	66,428
220TTG-3	GEAR	3,331	3,331	3,331	3,868	N/A	6,597	9,527	14,319	24,355	32,146	71,553

#### **NOTES:**

- (1) Valves with 316 SS shafts are rated to 150 psi max. differential pressure for Class 150 ANSI rated valves and 300 psi and 600 psi for Class 300 and Class 600 rated valves respectively. Consult the factory with details for any marginal applications.
- (2) Hand Levers are not recommended for use with Class 150 Soft Seat Valves larger than 8" and Class 300 larger than 6" sizes. Hand Levers are not recommended for use with Class 600 Valves.
- (3) **Note** - that the **RTFE** seat is preferred to the **TFE** seat for the higher pressures associated with Class 600 valves - and should be considered where a shutoff pressure exceeds 1000 psi. **RTFE** price adders appear on Pages 22 & 23.
- (4) See Pages 24 & 25 for Optional Adders.

**FLOWSEAL:**

**FIRE FLOW - WAFER - CS BODY  
17-4PH SHAFT**

**FIRE-FLOW - CLASS 150 (1) - WAFER STYLE (W) - CARBON STEEL BODY (1)**

316 SS/ENP DISC(9), 17-4 PH SHAFT(1), TFE & INCONEL SEAT(F), FIRE-FLOW PACKING(F), GARFIL & 316SS BEARINGS(F)

191FFF-B	NONE (B)	1,070	1,070	1,070	1,250	1,878	1,878	2,673
191FFF-H	HANDLE (H)	1,140	1,140	1,140	1,321	1,962	1,962	N/A
191FFF-3	GEAR (3)	1,338	1,338	1,338	1,517	2,147	2,147	2,941

Figure No.	Actuator	10"	12"	14"	16"	18"	20"	24"	30"	36"	42"	48"
191FFF-B	NONE	4,463	5,902	8,240	10,839	13,192	15,945	23,457	40,838	67,291	97,760	166,506
191FFF-3	GEAR	4,776	6,591	8,976	11,575	13,928	17,193	26,077	44,528	71,436	108,126	178,335

**FIRE-FLOW - CLASS 300 (3)**

Figure No.	Operator	2"	2.5"	3"	4"	5"	6"
191FFF-B	NONE	1,132	1,132	1,132	1,350	1,915	1,915
191FFF-H	HANDLE	1,199	1,199	1,199	1,418	2,036	2,036
191FFF-3	GEAR	1,387	1,387	1,387	1,606	2,171	2,171

Figure No.	Operator	8"	10"	12"	14"	16"	18"	20"	24"	30"
191FFF-B	NONE	3,208	4,789	6,677	11,037	13,589	17,588	23,516	31,609	59,554
191FFF-3	GEAR	3,476	5,478	7,366	11,794	14,835	20,208	26,137	35,755	67,816

**FIRE-FLOW - CLASS 600 (6)**

Figure No.	Operator	2"	2.5"	3"	4"	5"	6"	8"	10"	12"	14"	16"
191FFF-B	NONE	2,479	2,479	2,479	3,769	N/A	5,744	8,746	10,945	15,873	26,144	37,503
191FFF-3	GEAR	2,986	2,986	2,986	4,276	N/A	6,251	10,049	12,284	18,667	28,112	41,670

**NOTES:**

- (1) Hand Levers are not recommended for use with Class 150 and 300 valves larger than 6".  
Hand Levers are not recommended for use with Class 600 Valves.
- (2) See Pages 24 & 25 for Optional Adders.

**FLOWSEAL:****FIRE FLOW - LUG - CS BODY  
17-4PH SHAFT****FIRE-FLOW - CLASS 150 (1) - LUG STYLE (L) - CARBON STEEL BODY (1)**

316 SS/ENP DISC(9), 17-4 PH SHAFT(1), TFE &amp; INCONEL SEAT(F), FIRE-FLOW PACKING(F), GARFIL &amp; 316SS BEARINGS(F)

Figure No.	Actuator	2"	2.5"	3"	4"	5"	6"	8"
191FFF-B	NONE (B)	1,369	1,369	1,369	1,692	2,541	2,541	3,382
191FFF-H	HANDLE (H)	1,440	1,440	1,440	1,763	2,624	2,624	N/A
191FFF-3	GEAR (3)	1,637	1,637	1,637	1,960	2,809	2,809	3,650

Figure No.	Actuator	10"	12"	14"	16"	18"	20"	24"	30"	36"	42"	48"
191FFF-B	NONE	4,998	6,573	8,376	12,006	14,140	18,272	26,372	44,199	67,341	108,702	181,155
191FFF-3	GEAR	5,311	7,262	9,112	12,742	14,876	19,518	28,992	48,344	71,485	119,067	192,985

**FIRE-FLOW - CLASS 300 (3)**

Figure No.	Actuator	2"	2.5"	3"	4"	5"	6"
191FFF-B	NONE	1,542	1,542	1,542	1,789	2,734	2,734
191FFF-H	HANDLE	1,613	1,613	1,613	1,860	2,861	2,861
191FFF-3	GEAR	1,810	1,810	1,810	2,057	3,002	3,002

Figure No.	Actuator	8"	10"	12"	14"	16"	18"	20"	24"	30"
191FFF-B	NONE	3,977	5,981	8,495	13,825	15,553	20,160	26,021	36,070	68,394
191FFF-3	GEAR	4,340	6,670	9,183	14,582	16,799	22,780	28,641	40,214	62,169

**FIRE-FLOW - CLASS 600 (6)**

Figure No.	Actuator	2"	2.5"	3"	4"	5"	6"	8"	10"	12"	14"	16"
191FFF-B	NONE	N/A	N/A	2,980	4,521	N/A	6,892	12,407	16,580	18,646	27,780	42,133
191FFF-3	GEAR	N/A	N/A	3,488	5,028	N/A	7,401	13,710	17,920	21,434	29,725	46,300

**NOTES:**

- (1) Hand Levers are not recommended for use with Class 150 and 300 valves larger than 6".  
Hand Levers are not recommended for use with Class 600 Valves.
- (2) See Pages 24 & 25 for Optional Adders.

**FLOWSEAL:****FIRE FLOW - WAFER - SS BODY  
17-4PH SHAFT****FIRE-FLOW - CLASS 150 (1) - WAFER STYLE (W) - STAINLESS STEEL BODY (2)**

316 SS/ENP DISC(9), 17-4 PH SHAFT(1), TFE &amp; METAL SEAT(F), FIRE-FLOW PACKING(F), GARFIL &amp; 316SS BEARINGS(F)

Figure No.	Actuator	2"	2.5"	3"	4"	5"	6"	8"
291FFF-B	NONE (B)	1,316	1,316	1,316	1,622	2,375	2,375	3,804
291FFF-H	HANDLE (H)	1,386	1,386	1,386	1,694	2,459	2,459	N/A
291FFF-3	GEAR (3)	1,583	1,583	1,583	1,891	2,644	2,644	4,073

Figure No.	Actuator	10"	12"	14"	16"	18"	20"	24"	30"	36"	42"	48"
291FFF-B	NONE	5,724	7,125	12,322	13,774	18,383	23,027	32,720	53,802	76,221	108,553	183,703
291FFF-3	GEAR	6,038	7,814	13,058	14,510	19,119	24,273	35,340	57,947	80,366	118,918	195,532

**FIRE-FLOW - CLASS 300 (3)**

Figure No.	Operator	2"	2.5"	3"	4"	5"	6"
291FFF-B	NONE	1,488	1,488	1,488	1,834	2,629	2,629
291FFF-H	HANDLE	1,558	1,558	1,558	1,906	2,756	2,756
291FFF-3	GEAR	1,756	1,756	1,756	2,103	2,897	2,897

Figure No.	Operator	8"	10"	12"	14"	16"	18"	20"	24"	30"
291FFF-B	NONE	5,315	7,687	11,187	17,964	19,195	26,595	33,943	51,753	78,343
291FFF-3	GEAR	5,583	8,376	11,876	18,722	20,441	29,215	36,563	55,899	86,606

**FIRE-FLOW - CLASS 600 (6)**

Figure No.	Operator	2"	2.5"	3"	4"	5"	6"	8"	10"	12"	14"	16"
291FFF-B	NONE	N/A	N/A	1,733	2,448	N/A	4,766	10,321	13,986	25,012	38,699	55,378
291FFF-3	GEAR	N/A	N/A	2,139	2,801	N/A	4,948	10,929	14,360	27,806	42,932	59,611

**NOTES:**

(1) Hand Levers are not recommended for use with Class 150 and 300 valves larger than 6".

Hand Levers are not recommended for use with Class 600 Valves.

(2) See Pages 24 &amp; 25 for Optional Adders.

**FLOWSEAL:****FIRE FLOW - LUG - SS BODY  
17-4PH SHAFT****FIRE-FLOW - CLASS 150 (1) - LUG STYLE (L) - STAINLESS STEEL BODY (2)****316 SS/ENP DISC(9), 17-4 PH SHAFT(1), TFE & INCONEL SEAT(F), FIRE-FLOW PACKING(F), GARFIL & 316SS BEARINGS(F)**

Figure No.	Actuator	2"	2.5"	3"	4"	5"	6"	8"
291FFF-B	NONE (B)	1,769	1,769	1,769	2,204	3,547	3,547	4,781
291FFF-H	HANDLE (H)	1,838	1,838	1,838	2,274	3,628	3,628	N/A
291FFF-3	GEAR (3)	2,030	2,030	2,030	2,465	3,808	3,808	5,042

Figure No.	Actuator	10"	12"	14"	16"	18"	20"	24"	30"	36"	42"	48"
291FFF-B	NONE	6,628	8,767	12,650	15,414	19,876	25,529	34,817	72,109	90,742	115,442	192,686
291FFF-3	GEAR	6,932	9,437	13,365	16,219	20,591	26,739	37,363	76,135	94,768	125,520	204,177

**FIRE-FLOW - CLASS 300 (3)**

Figure No.	Actuator	2"	2.5"	3"	4"	5"	6"
291FFF-B	NONE	2,053	2,053	2,053	2,399	4,044	4,044
291FFF-H	HANDLE	2,123	2,123	2,123	2,471	4,172	4,172
291FFF-3	GEAR	2,321	2,321	2,321	2,668	4,312	4,312

Figure No.	Actuator	8"	10"	12"	14"	16"	18"	20"	24"	30"
291FFF-B	NONE	6,808	11,991	14,619	22,054	25,744	34,804	45,009	62,365	89,401
291FFF-3	GEAR	7,076	12,681	15,309	22,812	26,990	37,425	47,630	66,510	97,664

**FIRE-FLOW - CLASS 600 (6)**

Figure No.	Actuator	2"	2.5"	3"	4"	5"	6"	8"	10"	12"	14"	16"
291FFF-B	NONE	N/A	N/A	2,274	3,185	N/A	6,182	14,212	21,379	28,469	35,826	74,391
291FFF-3	GEAR	N/A	N/A	2,809	3,720	N/A	6,716	15,584	22,789	31,263	40,059	78,624

**NOTES:**

- (1) Hand Levers are not recommended for use with Class 150 and 300 valves larger than 6".  
 Hand Levers are not recommended for use with Class 600 Valves.  
 (3) See Pages 24 & 25 for Optional Adders.

# **FLOWSEAL:**

## **METAL SEAT - WAFER - CS BODY CLASS 150**

### **METAL SEAT - CLASS 150 (1) - WAFER STYLE (W) - CARBON STEEL BODY (1)**

**316 SS/NITRIDED DISC(7), 17-4 PH SHAFT(1), INCONEL METAL SEAT(M), TFE PACKING(T), GLASS / TFE BEARINGS(G)**

Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
171MTG-B	NONE(B)	(-)20 to 500	1,087	1,087	1,087	1,354	2,031	2,031	2,830
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	24"
171MTG-B	NONE(B)	(-)20 to 500	4,738	6,172	8,801	11,545	13,931	17,224	24,218

Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
171MTG-3	GEAR(3)	(-)20 to 500	1,498	1,498	1,498	1,764	2,443	2,443	3,241
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	24"
171MTG-3	GEAR(3)	(-)20 to 500	5,224	7,041	9,728	12,473	14,872	18,698	27,373

### **316 SS/NITRIDED DISC(7), 17-4 PH SHAFT(1), INCONEL METAL SEAT(M), GRAPHITE PACKING(G), BRONZE BEARINGS(B)**

Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
171MGB-B	NONE	501 to 750	1,087	1,087	1,087	1,354	2,031	2,031	2,830
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	24"
171MGB-B	NONE	501 to 750	4,738	6,172	8,801	11,545	13,931	17,224	24,218

Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
171MGB-3	GEAR	501 to 750	1,498	1,498	1,498	1,764	2,443	2,443	3,241
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	24"
171MGB-3	GEAR	501 to 750	5,224	7,041	9,728	12,473	14,872	18,698	27,373

### **316 SS/NITRIDED DISC(7), 316 SS SHAFT(2), INCONEL METAL SEAT(M), GRAPHITE PACKING(G), 316 SS BEARINGS(S)**

Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
172MGS-B	NONE	751 to 800	1,096	1,096	1,096	1,364	2,050	2,050	2,860
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	24"
172MGS-B	NONE	751 to 800	4,770	6,224	8,867	11,623	14,031	17,349	24,376

Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
172MGS-3	GEAR	751 to 800	1,507	1,507	1,507	1,775	2,461	2,461	3,272
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	24"
172MGS-3	GEAR	751 to 800	5,256	7,093	9,795	12,552	14,973	18,823	27,530

#### **NOTES:**

- (1) Hand Levers are not recommended for use with Metal Seat valves.
- (2) Class 300 Metal Seat valves with 316 SS shafts are rated to 300 psi max. differential pressure. Inconel shaft material is required for shutoff pressures exceeding 300 psi.
- (3) Metal Seat Valves provide Class IV shutoff.
- (4) See Pages 24 & 25 for Optional Adders.

# **FLOWSEAL:**

## **METAL SEAT - WAFER - CS BODY CLASS 300**

### **METAL SEAT - CLASS 300 (3) - WAFER STYLE (W) - CARBON STEEL BODY (1)** 316 SS/NITRIDED DISC(7), 17-4 PH SHAFT(1), INCONEL METAL SEAT(M), TFE PACKING(T), GLASS / TFE BEARINGS(G)

Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
171MTG-B	NONE(B)	(-)20 to 500	1,148	1,148	1,148	1,428	2,076	2,076	3,296
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	
171MTG-B	NONE(B)	(-)20 to 500	4,973	6,761	12,181	14,638	19,214	25,255	

Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
171MTG-3	GEAR(3)	(-)20 to 500	1,551	1,551	1,551	1,832	2,479	2,479	3,699
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	
171MTG-3	GEAR(3)	(-)20 to 500	5,825	7,615	13,126	16,085	22,308	28,349	

### **316 SS/NITRIDED DISC(7), 17-4 PH SHAFT(1), INCONEL METAL SEAT(M), GRAPHITE PACKING(G), BRONZE BEARINGS(B)**

Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
171MGB-B	NONE	501 to 750	1,148	1,148	1,148	1,428	2,076	2,076	3,296
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	
171MGB-B	NONE	501 to 750	4,973	6,761	12,181	14,638	19,214	25,255	

Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
171MGB-3	GEAR	501 to 750	1,551	1,551	1,551	1,832	2,479	2,479	3,699
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	
171MGB-3	GEAR	501 to 750	5,825	7,615	13,126	16,085	22,308	28,349	

### **316 SS/NITRIDED DISC(7), 316 SS SHAFT(2), INCONEL METAL SEAT(M), GRAPHITE PACKING(G), 316 SS BEARINGS(S)**

Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
172MGS-B	NONE	751 to 800	1,156	1,156	1,156	1,441	2,104	2,105	3,591
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	
172MGS-B	NONE	751 to 800	5,019	6,823	12,260	14,736	19,335	25,406	

Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
172MGS-3	GEAR	751 to 800	1,559	1,559	1,559	1,845	2,507	2,508	3,994
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	
172MGS-3	GEAR	751 to 800	5,872	7,676	13,205	16,182	22,430	28,501	

#### **NOTES:**

- (1) Hand Levers are not recommended for use with Metal Seat valves.
- (2) Class 300 Metal Seat valves with 316 SS shafts are rated to 300 psi max. differential pressure. Inconel shaft material is required for shutoff pressures exceeding 300 psi.
- (3) Metal Seat Valves provide Class IV shutoff.
- (4) See Pages 24 & 25 for Optional Adders.

# **FLOWSEAL:**

## **METAL SEAT - LUG - CS BODY CLASS 150**

### **METAL SEAT - CLASS 150 (1) - LUG STYLE (L) - CARBON STEEL BODY (1)**

316 SS/NITRIDED DISC(7), 17-4 PH SHAFT(1), INCONEL METAL SEAT(M), TFE PACKING(T), GLASS / TFE BEARINGS(G)

Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
171MTG-B	NONE(B)	(-)20 to 500	1,451	1,451	1,451	1,732	2,739	2,739	3,606
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	24"
171MTG-B	NONE(B)	(-)20 to 500	5,440	6,911	9,217	13,025	15,536	19,959	28,767

Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
171MTG-3	GEAR(3)	(-)20 to 500	1,862	1,862	1,862	2,143	3,151	3,151	4,017
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	24"
171MTG-3	GEAR(3)	(-)20 to 500	5,925	7,780	10,145	13,954	16,477	21,433	31,921

316 SS/NITRIDED DISC(7), 17-4 PH SHAFT(1), INCONEL METAL SEAT(M), GRAPHITE PACKING(G), BRONZE BEARINGS(B)

Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
171MGB-B	NONE	501 to 750	1,451	1,451	1,451	1,732	2,739	2,739	3,606
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	24"
171MGB-B	NONE	501 to 750	5,440	6,911	9,217	13,025	15,536	19,959	28,767

Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
171MGB-3	GEAR	501 to 750	1,862	1,862	1,862	2,143	3,151	3,151	4,017
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	24"
171MGB-3	GEAR	501 to 750	5,925	7,780	10,145	13,954	16,477	21,433	31,921

316 SS/NITRIDED DISC(7), 316 SS SHAFT(2), INCONEL METAL SEAT(M), GRAPHITE PACKING(G), 316 SS BEARINGS(S)

Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
172MGS-B	NONE	751 to 800	1,458	1,458	1,458	1,732	2,760	2,760	3,636
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	24"
172MGS-B	NONE	751 to 800	5,471	6,911	9,283	13,105	15,637	20,086	28,925

Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
172MGS-3	GEAR	751 to 800	1,869	1,869	1,869	2,143	3,170	3,170	4,048
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	24"
172MGS-3	GEAR	751 to 800	5,957	7,780	10,211	14,034	16,579	21,561	32,079

#### **NOTES:**

- (1) Hand Levers are not recommended for use with Metal Seat valves.
- (2) Class 300 Metal Seat valves with 316 SS shafts are rated to 300 psi max. differential pressure. Inconel shaft material is required for shutoff pressures exceeding 300 psi.
- (3) Metal Seat Valves provide Class IV shutoff.
- (4) See Pages 24 & 25 for Optional Adders.

# **FLOWSEAL:**

## **METAL SEAT - LUG - CS BODY CLASS 300**

### **METAL SEAT - CLASS 300 (3) - LUG STYLE (L) - CARBON STEEL BODY (1)**

316 SS/NITRIDED DISC(7), 17-4 PH SHAFT(1), INCONEL METAL SEAT(M), TFE PACKING(T), GLASS / TFE BEARINGS(G)

Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
171MTG-B	NONE(B)	(-20 to 500	1,611	1,611	1,611	1,836	2,852	2,962	4,111
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	
171MTG-B	NONE(B)	(-20 to 500	6,990	9,024	15,147	17,194	22,332	28,749	
Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
171MTG-3	GEAR(3)	(-20 to 500	2,022	2,022	2,022	2,247	3,262	3,373	4,522
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	
171MTG-3	GEAR(3)	(-20 to 500	7,859	9,893	16,110	18,668	25,486	31,902	

316 SS/NITRIDED DISC(7), 17-4 PH SHAFT(1), INCONEL METAL SEAT(M), GRAPHITE PACKING(G), BRONZE BEARINGS(B)

Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
171MGB-B	NONE	501 to 750	1,611	1,611	1,611	1,836	2,852	2,962	4,111
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	
171MGB-B	NONE	501 to 750	6,990	9,024	15,147	17,194	22,332	28,749	

Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
171MGB-3	GEAR	501 to 750	2,022	2,022	2,022	2,247	3,262	3,373	4,522
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	
171MGB-3	GEAR	501 to 750	7,859	9,893	16,110	18,668	25,486	31,902	

316 SS/NITRIDED DISC(7), 316 SS SHAFT(2), INCONEL METAL SEAT(M), GRAPHITE PACKING(G), 316 SS BEARINGS(S)

Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
172MGS-B	NONE	751 to 800	1,619	1,619	1,619	1,947	2,993	2,993	4,409
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	
172MGS-B	NONE	751 to 800	7,038	9,089	15,231	17,297	22,461	28,825	

Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
172MGS-3	GEAR	751 to 800	2,030	2,030	2,030	2,358	3,404	3,404	4,820
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	
172MGS-3	GEAR	751 to 800	7,907	9,957	16,194	18,771	25,616	31,979	

#### **NOTES:**

- (1) Hand Levers are not recommended for use with Metal Seat valves.
- (2) Class 300 Metal Seat valves with 316 SS shafts are rated to 300 psi max. differential pressure. Inconel shaft material is required for shutoff pressures exceeding 300 psi.
- (3) Metal Seat Valves provide Class IV shutoff.
- (4) See Pages 24 & 25 for Optional Adders.

**FLOWSEAL:**

# **METAL SEAT - WAFER - SS BODY** **CLASS 150**

## **METAL SEAT - CLASS 150 (1) - WAFER STYLE (W) - 316 SS BODY (2)**

316 SS/NITRIDED DISC(7), 17-4 PH SHAFT(1), INCONEL METAL SEAT(M), TFE PACKING(T), GLASS / TFE BEARINGS(G)

Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
271MTG-B	NONE(B)	(-20 to 500	1,329	1,329	1,329	1,733	2,475	2,475	3,709
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	24"
271MTG-B	NONE(B)	(-20 to 500	6,006	7,436	12,749	14,042	18,885	23,947	34,299

Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
271MTG-3	GEAR(3)	(-20 to 500	1,733	1,733	1,733	2,136	2,878	2,878	4,112
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	24"
271MTG-3	GEAR(3)	(-20 to 500	6,483	8,289	13,659	14,953	19,808	25,394	37,394

316 SS/NITRIDED DISC(7), 17-4 PH SHAFT(1), INCONEL METAL SEAT(M), GRAPHITE PACKING(G), BRONZE BEARINGS(B)

Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
271MGB-B	NONE	501 to 750	1,329	1,329	1,329	1,733	2,475	2,475	3,709
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	24"
271MGB-B	NONE	501 to 750	6,006	7,436	12,749	14,042	18,885	23,947	34,229

Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
271MGB-3	GEAR	501 to 750	1,733	1,733	1,733	2,136	2,878	2,878	4,112
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	24"
271MGB-3	GEAR	501 to 750	6,483	8,289	13,659	14,953	19,808	25,394	37,394

316 SS/NITRIDED DISC(7), 316 SS SHAFT(2), INCONEL METAL SEAT(M), GRAPHITE PACKING(G), 316 SS BEARINGS(S)

Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
272MGS-B	NONE	751 to 800	1,338	1,338	1,338	1,744	2,493	2,493	3,738
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	24"
272MGS-B	NONE	751 to 800	6,038	7,483	12,816	14,119	18,983	24,074	34,454

Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
272MGS-3	GEAR	751 to 800	1,741	1,741	1,741	2,148	2,897	2,897	4,141
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	24"
272MGS-3	GEAR	751 to 800	6,513	8,337	13,727	15,031	19,907	25,521	37,548

**NOTES:**

- (1) Hand Levers are not recommended for use with Metal Seat valves.
- (2) Class 300 Metal Seat valves with 316 SS shafts are rated to 300 psi max. differential pressure. Inconel shaft material is required for shutoff pressures exceeding 300 psi.
- (3) Metal Seat Valves provide Class IV shutoff.
- (4) See Pages 24 & 25 for Optional Adders.

# **FLOWSEAL:**

## **METAL SEAT - WAFER - CS BODY CLASS 300**

### **METAL SEAT - CLASS 300 (3) - WAFER STYLE (W) - 316 SS BODY (2)**

316 SS/NITRIDED DISC(7), 17-4 PH SHAFT(1), INCONEL METAL SEAT(M), TFE PACKING(T), GLASS / TFE BEARINGS(G)

Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
271MTG-B	NONE(B)	(-)20 to 500	1,499	1,499	1,499	1,840	2,801	2,801	5,638
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	
271MTG-B	NONE(B)	(-)20 to 500	7,869	12,235	18,886	20,197	28,650	36,538	

Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
271MTG-3	GEAR(3)	(-)20 to 500	1,891	1,891	1,891	2,232	3,193	3,193	6,030
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	
271MTG-3	GEAR(3)	(-)20 to 500	8,331	13,064	19,772	21,081	29,547	37,944	

316 SS/NITRIDED DISC(7), 17-4 PH SHAFT(1), INCONEL METAL SEAT(M), GRAPHITE PACKING(G), BRONZE BEARINGS(B)

Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
271MGB-B	NONE	501 to 750	1,499	1,499	1,499	1,840	2,801	2,801	5,638
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	
271MGB-B	NONE	501 to 750	7,869	12,235	18,886	20,197	28,650	36,538	

Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
271MGB-3	GEAR	501 to 750	1,891	1,891	1,891	2,232	3,193	3,193	6,030
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	
271MGB-3	GEAR	501 to 750	8,331	13,064	19,772	21,081	29,547	37,944	

316 SS/NITRIDED DISC(7), 316 SS SHAFT(2), INCONEL METAL SEAT(M), GRAPHITE PACKING(G), 316 SS BEARINGS(S)

Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
272MGS-B	NONE	751 to 800	1,499	1,499	1,499	1,851	2,827	2,827	5,673
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	
272MGS-B	NONE	751 to 800	7,916	12,296	18,971	20,296	28,774	36,693	

Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
272MGS-3	GEAR	751 to 800	1,891	1,891	1,891	2,243	3,220	3,220	6,065
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	
272MGS-3	GEAR	751 to 800	8,379	13,124	19,855	21,181	29,671	38,099	

### **NOTES:**

- (1) Hand Levers are not recommended for use with Metal Seat valves.
- (2) Class 300 Metal Seat valves with 316 SS shafts are rated to 300 psi max. differential pressure. Inconel shaft material is required for shutoff pressures exceeding 300 psi.
- (3) Metal Seat Valves provide Class IV shutoff.
- (4) See Pages 24 & 25 for Optional Adders.

**FLOWSEAL:**

**METAL SEAT - LUG - SS BODY  
CLASS 150**

**METAL SEAT - CLASS 150 (1) - LUG STYLE (L) - 316 SS BODY (2)**

**316 SS/NITRIDED DISC(7), 17-4 PH SHAFT(1), INCONEL METAL SEAT(M), TFE PACKING(T), GLASS / TFE BEARINGS(G)**

Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
271MTG-B	NONE(B)	(-)20 to 500	1,906	1,906	1,906	2,341	3,877	3,877	5,180
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	24"
271MTG-B	NONE(B)	(-)20 to 500	7,439	9,822	14,164	16,909	21,546	28,532	40,553

Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
271MTG-3	GEAR(3)	(-)20 to 500	2,317	2,317	2,317	2,752	4,287	4,287	5,591
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	24"
271MTG-3	GEAR(3)	(-)20 to 500	7,924	10,691	15,092	17,838	22,487	30,006	43,707

**316 SS/NITRIDED DISC(7), 17-4 PH SHAFT(1), INCONEL METAL SEAT(M), GRAPHITE PACKING(G), BRONZE BEARINGS(B)**

Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
271MGB-B	NONE	501 to 750	1,906	1,906	1,906	2,341	3,877	3,877	5,180
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	24"
271MGB-B	NONE	501 to 750	7,439	9,822	14,164	16,909	21,546	28,532	40,553

Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
271MGB-3	GEAR	501 to 750	2,317	2,317	2,317	2,752	4,287	4,287	5,591
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	24"
271MGB-3	GEAR	501 to 750	7,924	10,691	15,092	17,838	22,487	30,006	43,707

**316 SS/NITRIDED DISC(7), 316 SS SHAFT(2), INCONEL METAL SEAT(M), GRAPHITE PACKING(G), 316 SS BEARINGS(S)**

Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
272MGS-B	NONE	751 to 800	1,914	1,914	1,914	2,353	3,895	3,895	5,211
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	24"
272MGS-B	NONE	751 to 800	7,473	9,873	14,233	16,993	21,648	28,661	40,714

Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
272MGS-3	GEAR	751 to 800	2,325	2,325	2,325	2,765	4,306	4,306	5,622
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	24"
272MGS-3	GEAR	751 to 800	7,959	10,742	15,162	17,921	22,590	30,135	43,868

**NOTES:**

- (1) Hand Levers are not recommended for use with Metal Seat valves.
- (2) Class 300 Metal Seat valves with 316 SS shafts are rated to 300 psi max. differential pressure. Inconel shaft material is required for shutoff pressures exceeding 300 psi.
- (3) Metal Seat Valves provide Class IV shutoff.
- (4) See Pages 24 & 25 for Optional Adders.

# **FLOWSEAL:**

## **METAL SEAT - LUG - SS BODY CLASS 300**

### **METAL SEAT - CLASS 300 (3) - LUG STYLE (L) - 316 SS BODY (2)**

316 SS/NITRIDED DISC(7), 17-4 PH SHAFT(1), INCONEL METAL SEAT(M), TFE PACKING(T), GLASS / TFE BEARINGS(G)

Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
271MTG-B	NONE(B)	(-)20 to 500	2,172	2,172	2,172	2,594	4,411	4,411	7,616
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	
271MTG-B	NONE(B)	(-)20 to 500	13,356	16,646	24,918	28,253	37,810	50,297	
Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
271MTG-3	GEAR(3)	(-)20 to 500	2,583	2,583	2,583	3,006	4,821	4,821	8,027
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	
271MTG-3	GEAR(3)	(-)20 to 500	13,840	17,515	25,847	29,182	38,751	51,771	

316 SS/NITRIDED DISC(7), 17-4 PH SHAFT(1), INCONEL METAL SEAT(M), GRAPHITE PACKING(G), BRONZE BEARINGS(B)

Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
271MGB-B	NONE	501 to 750	2,172	2,172	2,172	2,594	4,411	4,411	7,616
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	
271MGB-B	NONE	501 to 750	13,356	16,646	24,918	28,253	37,810	50,297	
Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
271MGB-3	GEAR	501 to 750	2,583	2,583	2,583	3,006	4,821	4,821	8,027
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	
271MGB-3	GEAR	501 to 750	13,840	17,515	25,847	29,182	38,751	51,771	

316 SS/NITRIDED DISC(7), 316 SS SHAFT(2), INCONEL METAL SEAT(M), GRAPHITE PACKING(G), 316 SS BEARINGS(S)

Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
272MGS-B	NONE	751 to 800	2,181	2,181	2,181	2,605	4,441	4,441	7,652
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	
272MGS-B	NONE	751 to 800	13,407	16,712	25,007	28,359	37,940	50,462	
Figure No.	Actuator	Temp.(F)	2"	2.5"	3"	4"	5"	6"	8"
272MGS-3	GEAR	751 to 800	2,592	2,592	2,592	3,017	4,852	4,852	8,064
Figure No.	Actuator	Temp.(F)	10"	12"	14"	16"	18"	20"	
272MGS-3	GEAR	751 to 800	13,892	17,581	25,936	29,288	38,882	51,937	

#### **NOTES:**

- (1) Hand Levers are not recommended for use with Metal Seat valves.
- (2) Class 300 Metal Seat valves with 316 SS shafts are rated to 300 psi max. differential pressure. Inconel shaft material is required for shutoff pressures exceeding 300 psi.
- (3) Metal Seat Valves provide Class IV shutoff.
- (4) See Pages 24 & 25 for Optional Adders.

**FLOWSEAL:****STEAM SERVICE TO 100 PSIG  
SOFT SEAT - CLASS 150 WAFER****REINFORCED SOFT SEAT - CLASS 150 (1) - WAFER STYLE (W) - CARBON STEEL BODY (1)**  
316 SS DISC(2), 17-4 PH SHAFT(1), RTFE SEAT-STEAM(O), PTFE PACKING(T), GLASS BACKED PTFE BEARINGS(G)

Figure No.	Actuator	2"	2.5"	3"	4"	5"	6"	8"
121OTG-B	NONE (B)	901	905	916	1,046	1,440	1,496	2,006
121OTG-H	HANDLE (H)	972	977	987	1,117	1,524	1,580	2,134
121OTG-3	GEAR (3)	1,170	1,174	1,184	1,315	1,708	1,765	2,274

Figure No.	Actuator	10"	12"	14"	16"	18"	20"	24"
121OTG-B	NONE	3,604	4,767	7,000	9,634	11,506	13,637	18,426
121OTG-3	GEAR	3,917	5,457	7,736	10,370	12,242	14,884	21,046

**REINFORCED SOFT SEAT - CLASS 150 (1) - WAFER STYLE (W) - 316 SS BODY (2)**  
316 SS DISC(2), 17-4 PH SHAFT(1), RTFE SEAT-STEAM(O), PTFE PACKING(T), GLASS BACKED PTFE BEARINGS(G)

Figure No.	Actuator	2"	2.5"	3"	4"	5"	6"	8"
221OTG-B	NONE (B)	1,233	1,237	1,247	1,414	2,200	2,255	3,278
221OTG-H	HANDLE (H)	1,304	1,307	1,319	1,486	2,283	2,339	3,405
221OTG-3	GEAR (3)	1,502	1,505	1,516	1,683	2,468	2,524	3,546

Figure No.	Actuator	10"	12"	14"	16"	18"	20"	24"
221OTG-B	NONE	5,308	7,301	12,152	13,381	18,352	22,306	32,461
221OTG-3	GEAR	5,621	7,991	12,888	14,117	19,088	23,553	34,176

**NOTES:**

- (1) Soft Seat valves fitted with RTFE seat and AFLAS 'O'-Rings are suitable for Saturated Steam applications upto 100 psig (327 degs. F) and will provide bubble-tight shutoff.
- (2) Hand Levers are not recommended for use with Class 150 Soft Seat Valves larger than 8" size.
- (3) See Pages 24 & 25 for Optional Adders.

**FLOWSEAL:****STEAM SERVICE TO 100 PSIG  
SOFT SEAT - CLASS 150 LUG****REINFORCED SOFT SEAT - CLASS 150 (1) - LUG STYLE (L) - CARBON STEEL BODY (1)**  
316 SS DISC(2), 17-4 PH SHAFT(1), RTFE SEAT-STEAM(O), PTFE PACKING(T), GLASS BACKED PTFE BEARINGS(G)

Figure No.	Actuator	2"	2.5"	3"	4"	5"	6"	8"
121OTG-B	NONE (B)	1,175	1,178	1,189	1,403	2,161	2,218	2,806
121OTG-H	HANDLE (H)	1,245	1,250	1,260	1,474	2,245	2,302	2,933
121ORTG-3	GEAR (3)	1,443	1,447	1,457	1,672	2,430	2,993	4,511

Figure No.	Actuator	10"	12"	14"	16"	18"	20"	24"
121OTG-B	NONE	4,339	5,583	7,216	10,715	12,480	15,903	22,346
121OTG-3	GEAR	4,652	6,273	7,952	11,451	13,216	17,150	24,967

**REINFORCED SOFT SEAT - CLASS 150 (1) - LUG STYLE (L) - 316 SS BODY (2)**  
316 SS DISC(2), 17-4 PH SHAFT(1), RTFE SEAT-STEAM(O), PTFE PACKING(T), GLASS BACKED PTFE BEARINGS(G)

Figure No.	Actuator	2"	2.5"	3"	4"	5"	6"	8"
221OTG-B	NONE (B)	1,596	1,599	1,610	1,954	3,161	3,216	4,476
221OTG-H	HANDLE (H)	1,666	1,671	1,681	2,025	3,243	3,300	4,604
221OTG-3	GEAR (3)	1,644	1,647	1,657	1,960	3,023	3,073	4,185

Figure No.	Actuator	10"	12"	14"	16"	18"	20"	24"
221OTG-B	NONE	6,307	8,265	12,323	14,676	19,316	25,353	36,078
221OTG-3	GEAR	6,620	8,954	13,059	15,412	20,052	26,601	38,699

- (1) Soft Seat valves fitted with RTFE seat and AFLAS 'O'-Rings are suitable for Saturated Steam applications upto 100 psig (327 degs. F) and will provide bubble-tight shutoff.
- (2) Hand Levers are not recommended for use with Class 150 Soft Seat Valves larger than 8" size.
- (3) See Pages 24 & 25 for Optional Adders.

# **FLOWSEAL:**

## **OPTIONAL ADDERS**

ITEM	DESCRIPTION	2"	2.5"	3"	4"	5"	6"	8"	10"	12"
DISC (6)	Monel (3)	414	422	427	624	907	1,053	1,989	3,695	5,653
	316 SS (2)	6	6	8	11	19	27	33	46	59
	Monel (3)	175	175	183	202	261	298	454	649	1,199
SHAFT (7)	Nitronic 50 SS (0)	507	507	540	553	667	727	773	840	1,073
	Inconel 718 (6)	1,600	1,600	1,600	1,627	1,827	1,880	2,113	2,533	2,927
SEAT (8)	RTFE (R)	67	75	84	114	131	148	186	195	215
PACKING (9)	Graphite (G)	18	18	30	30	46	46	79	98	106
BEARINGS (10)	Live-Load (X)	520	520	520	520	520	520	535	535	535
	316 SS - Backed TFE (H)	126	126	139	139	182	182	218	218	328
BI-DIRECT DES (D)	CLASS 150	500	500	500	733	733	733	1,200	1,200	1,633
	CLASS 300	600	600	600	880	880	880	1,440	1,440	1,440
NACE TRIM (N)	to Standard MR0175	33	33	51	80	125	125	164	258	292
PAINT-EXTERIOR (X)	Epoxy (see Note 1)	247	273	293	440	440	487	540	587	633
	Lever (Infinite Control) (T)	109	109	109	191	191	191	n/a	n/a	n/a
	High Temp. Gearbox for 150# (X) (see Note 2)	403	403	403	403	403	403	403	477	853
	High Temp. Gearbox for 300# (X) (see Note 2.)	403	403	403	403	403	403	403	477	853
ACTUATORS (11)	Gearbox Locking Device (X) (see Note 3)	320	320	320	320	320	320	320	320	320
	Gearbox Memory Stop (L)	413	413	413	413	413	413	413	413	413
	Buried Service (X) (see Note 4)	740	740	740	740	740	740	740	740	887

### **NOTES:**

- Prices apply to Class 150 - 600 valves, except where indicated otherwise.
- Prices include standard epoxy coating procedure, MSP-16-1 - and SS packing gland components.
- For >200 degs. F ambient - includes bronze thrust bearings, high temp. grease and seals and metal indicator
- Prices are for the double flange type locking feature.
- Prices are for the complete buried service gear actuator
- Letter and Numbers in parenthesis relate to the Figure Number System described on the back cover of the Price List.

# **FLOWSEAL:**

## **OPTIONAL ADDERS**

ITEM	DESCRIPTION	14"	16"	18"	20"	24"	30"	36"	42"	48"
<b>DISC (6)</b>	<b>Monel (3)</b>	1,795	9,714	11,149	15,118	24,617	40,089	6,118	20,748	23,862
	<b>316 SS (2)</b>	78	99	124	154	201	254	340	462	632
	<b>Monel (3)</b>	3,494	4,400	5,667	7,500	9,327	17,841	36,762	47,116	58,563
<b>SHAFT (7)</b>	<b>Nitronic 50 SS (0)</b>	1,233	1,880	2,153	3,320	3,980	7,080	15,281	20,301	26,508
	<b>Inconel 718 (6)</b>	POA	POA	POA	POA	POA	POA	POA	POA	POA
<b>SEAT (8)</b>	<b>RTFE (R)</b>	263	303	319	356	393	490	534	608	680
	<b>Graphite (G)</b>	250	329	468	628	725	780	851	924	1,021
<b>PACKING (9)</b>	<b>Live-Load (X)</b>	535	604	604	604	888	2,378	2,378	3,334	4,334
<b>BEARINGS (10)</b>	<b>316 SS - Backed TFE (H)</b>	351	372	387	467	545	622	680	760	902
	<b>Class 150</b>	1,633	1,900	1,900	2,300	2,300	2,800	N/A	N/A	N/A
<b>BI-DIRECT DES (D)</b>	<b>Class 300</b>	1,960	2,280	2,280	2,760	2,760	3,360	N/A	N/A	N/A
<b>NACE TRIM (N)</b>	<b>to Standard MR0175</b>	2,667	2,905	3,196	3,666	5,583	9,162	9,587	10,458	11,330
<b>PAINT-EXTERIOR (X)</b>	<b>Epoxy (see Note 1)</b>	687	639	680	726	808	1,063	1,284	1,598	2,034
	<b>Lever (Infinite Control) (T)</b>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	<b>High Temp. Gearbox for 150# (X) (see Note 2)</b>	736	736	736	1,246	2,621	POA	POA	POA	POA
	<b>High Temp. Gearbox for 300# (X) (see Note 2.)</b>	945	1,447	3,094	3,094	POA	POA	POA	POA	POA
<b>ACTUATORS (11)</b>	<b>Gearbox Locking Device (X) (see Note 3)</b>	320	320	320	320	320	320	320	320	320
	<b>Gearbox Memory Stop (L)</b>	133	133	133	344	415	616	695	695	800
	<b>Buried Service (X) (see Note 4)</b>	887	887	887	2,293	2,767	4,107	4,634	4,634	5,334

### **NOTES:**

1. Prices apply to Class 150 - 600 valves, except where indicated otherwise.
2. Prices include standard epoxy coating procedure, MSP-16-1 - and SS packing gland components.
3. For >200 degs. F ambient - includes bronze thrust bearings, high temp. grease and seals and metal indicator
4. Prices are for the double flange type locking feature.
5. Prices are for the complete buried service gear actuator
6. Letter and Numbers in parenthesis relate to the Figure Number System described on the back cover of the Price List.

**FLOWSEAL:****ACCESSORIES - CHAINWHEELS****Chainwheel**

Includes Cast Iron Sprocket Rim, Malleable Iron Guide Arm, Safety Hub and Clamps for attachment to rim of handwheel. Chainwheel Model #2 fits 8" handwheels; Model #2 1/2 fits 12" handwheels; Model #3 1/2 fits 18" handwheels; Model #4 1/2 fits 24" handwheels; Model #5 fits 30" handwheels.

**Class 150 - Soft Seat**

Valve Size	2" to 10"	12" to 16"	18" to 20"	24" to 36"
Chainwheel Number	#2	#2 1/2	#3 1/2	#4 1/2
Part Number	19600-0011	19600-0012	19600-0014	19600-0015
List Price	266	356	615	1,183

**Class 150 - Fire-Flow Seat**

Valve Size	2" to 8"	10" to 14"	16" to 30"	36"
Chainwheel Number	#2	#2 1/2	#4 1/2	#5
Part Number	19600-0011	19600-0012	19600-0015	19600-0016
List Price	266	356	1,183	1,384

**Class 150 - Metal Seat**

Valve Size	2" to 8"	10" to 12"	14" to 18"	20"	24" to 36"
Chainwheel Number	#2	#2 1/2	#3 1/2	#5	#4 1/2
Part Number	19600-0011	19600-0012	19600-0015	19600-0016	19600-0015
List Price	266	356	1,183	1,384	1,183

**Class 300 - Soft Seat**

Valve Size	2" to 8"	10" to 12"	14" to 16"	18"	20" to 30"
Chainwheel Number	#2	#2 1/2	#4 1/2	#3 1/2	#5
Part Number	19600-0011	19600-0012	19600-0015	19600-0014	19600-0016
List Price	266	356	1,183	615	1,384

**Class 300 - Fire-Flow Seat or Metal Seat**

Valve Size	2" to 6"	8"	10"	12" to 20"	24" to 30"
Chainwheel Number	#2	#2 1/2	#3 1/2	#4 1/2	#5
Part Number	19600-0011	19600-0012	19600-0014	19600-0015	19600-0016
List Price	266	356	615	1,183	1,384

**Class 600 - Price on Application****Chain**

Chainwheel Number	#2	#2 1/2	#3 1/2	#4 1/2	#5
Chain Part Number	19700-0002	19700-0001	19700-0001	19700-0003	19700-0003
List Price (Per Foot)	3.96	4.57	4.57	5.48	5.48